

O I P E

APR 28 2004

EV 404053588 US 04-29-04

PTO/SB/21 (02-04)

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PATENT & TRADEMARK OFFICE

**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

		Application Number	10/766,226
		Filing Date	January 28, 2004
		First Named Inventor	Benjamin A. Buscher, et. al
		Art Unit	Unknown
		Examiner Name	Unknown
Total Number of Pages in This Submission		Attorney Docket Number	1748-000001/US

ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to Group
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input checked="" type="checkbox"/> Other Enclosure(s) <i>(please identify below):</i>
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund	Form HDP-1449 (4 pages) & 15 Non-Patent References; Return Postcard Received
<input checked="" type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____	
<input type="checkbox"/> Certified Copy of Priority Document(s)		
<input type="checkbox"/> Response to Missing Parts/ Incomplete Application		
<input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53		
Remarks		
Express Mail Label No. EV 404053588 US		

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	David L. Howard, Reg No. #41,502 Harness, Dickey & Pierce, P.L.C.
Signature	
Date	4/28/04

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below.

Typed or printed name	David L. Howard
Signature	
Date	4/28/04

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



EV-404053588 US

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.: 10/766,226

Filing Date: January 28, 2004

Applicant: Benjamin A. Buscher, et. al

Group Art Unit: unknown

Examiner: unknown

Title: Method of Discovery of Broad Spectrum Antiviral Agents

Attorney Docket: 1748-000001/US

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§ 1.56, 1.97 and 1.98, Applicant hereby submits an Information Disclosure Statement for consideration by the Examiner.

I. LIST OF PATENTS, PUBLICATIONS, AND OTHER INFORMATION

The patents, publications and other information requested to be considered by the Office (except unpublished U.S. patent applications) are listed on Form 1449 attached hereto.

II. COPIES

A. ____ Submitted herewith is a legible copy of (i) each U.S. patent application publication and U.S. and foreign patent; (ii) each publication or that portion which caused it to be listed; (iii) for each cross-referenced pending U.S. application listed below in Section IV, the application specification including the claims, and any drawing of the application which caused it to be listed including the claims directed to that portion; and (iv) all other information or that portion which caused it to be listed.

B. ____ Any patents, publications or other information which are listed on Form 1449 or on the copies of PTO-892, but which are not enclosed herewith, were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing date under 35 U.S.C. § 120:

U.S. Serial Number

U.S. Filing Date

C. Because the present application was/is being filed after June 30, 2003, no copies of the U.S. patents or U.S. patent application publications which are listed on the attached Form 1449 are enclosed pursuant to the waiver of 37 C.F.R. § 1.98(a)(2)(i). Any foreign patent documents or non-patent literature listed on the attached Form 1449 are enclosed herewith.

D. This is a PCT application in the entry of the National Phase in the United States. A copy of the International Search Report is attached for the Examiner's information. The documents listed on the International Search Report are listed on the attached Form-1449 for consideration by the Examiner and for listing on any patent resulting from this application. If the International Search Report was from the US, EPO, or JPO search authorities, copies of these references should have been supplied to the USPTO under the trilateral agreement and are believed to be in the file of the above-identified application. (MPEP 1893.03(g))

III. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

A. Except as may be indicated below in (B), all of the patents, publications or other information are in the English language (concise explanation not required).

B. A concise explanation of the relevance of each patent, publication or other information listed that is not in the English language is as follows (see 37 C.F.R. § 1.98(a)(3)):

1. See the attached foreign patent office communication from a counterpart foreign application.
2. English translations are provided.
3. Other:

C. The following additional information is provided for the Examiner's consideration.

IV. CROSS REFERENCE TO RELATED APPLICATION(S)

A. The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this(these) application(s) to the Examiner's attention, Applicant(s) does(do) not waive the confidentiality provisions of 35 U.S.C. § 122.

Serial No.

Filing Date

Art Unit

V. THIS IDS IS BEING FILED UNDER

A. 37 C.F.R. § 1.97(b): (check only one box)

1. within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. § 1.97(b)(1)). No fee or certification is required.
2. within three months of the date of entry of the national stage as set forth in §1.491 in an international application (37 C.F.R. § 1.97(b)(2)). No fee or certification is required.
3. before the mailing of a first Office Action on the merits (37 C.F.R. § 1.97(b)(3)). No fee or certification is required. In the event that a first Office Action on the merits has been issued, please consider this IDS under 37 C.F.R. § 1.97(c) and see the certification under 37 C.F.R. § 1.97(e) below; or, if no certification has been made, charge our deposit account a fee in the amount of \$180.00 as required by 37 C.F.R. § 1.17(p).
4. before the mailing of a first Office Action after the filing of a request for continued examination under 37 C.F.R. § 1.114. No fee or certification is required.

B. **37 C.F.R. § 1.97(c):** (check only one box)

before the mailing date of either any Final Office Action under 37 C.F.R. § 1.113, a Notice of Allowance under 37 C.F.R. § 1.311, or an action that otherwise closes prosecution.

1. No certification; therefore, a fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).
2. See the certification below. No fee is required.

C. **37 C.F.R. § 1.97(d):**

after the mailing date of either a Final Office Action under 37 C.F.R. § 1.113 or a Notice of Allowance under 37 C.F.R. § 1.311, yet on or before payment of the issue fee.

1. See the certification below. A fee in the amount of \$180.00 is required by 37 C.F.R. § 1.17(p).

VI. **CERTIFICATION UNDER 37 C.F.R. § 1.97(e):** (check only one box)

The undersigned hereby certifies that:

- A. each item of information contained in this IDS was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(1)). See further statement under 37 C.F.R. 1.704(d) below in section VII, if applicable; or

B. no item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS (See 37 C.F.R. § 1.97(e)(2)).

C. Some of the items of information were first cited in a communication from a foreign patent office. As to this information, the undersigned hereby certifies that each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby certifies that no item of this remaining information contained in this IDS was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned after making reasonable inquiry, no item of information contained in this IDS was known to any individual designated in 37 C.F.R. § 1.56(c) more than three months prior to the filing of this IDS.

VII. STATEMENT UNDER 37 CFR 1.704(d)

The undersigned hereby states that:

each item of information contained in this IDS was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in 37 C.F.R. § 1.56(c) more than thirty days prior to the filing of this IDS.

VIII. PAYMENT OF FEES (check only one box)

A. A check in the amount of \$180.00 is enclosed for the above-identified fee.

B. Please charge Deposit Account No. 08-0750 in the amount of \$180.00 for the above-indicated fee. A duplicate copy of this paper is attached.

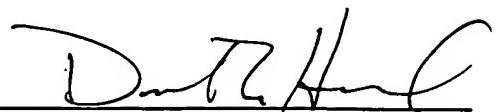
The above references are being cited only in the interest of candor and without any admission that they constitute statutory prior art, contain matter which anticipates the invention, or which would render the same obvious, either singly or in combination, to a person of ordinary skill in the art. Furthermore, this Information Disclosure Statement shall not be construed as a representation that a search has been made.

If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 08-0750.

Please charge any additional fees or credit any overpayment pursuant to 37 C.F.R. § 1.16 or § 1.17 to Deposit Account No. 08-0750.

Respectfully submitted,

Dated: 4/28/04

By: 
David L. Howard, Reg. No. 41,502

HARNESS, DICKEY & PIERCE, P.L.C.
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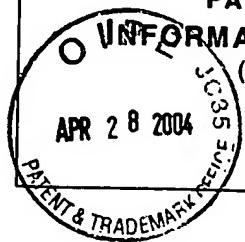
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EV 404053588 US

FORM HDP-1449 (Based on Form PTO-1449)

PATENT AND TRADEMARK OFFICE
INFORMATION DISCLOSURE CITATION
(Use several sheets if necessary)

Sheet 1 of 4



ATTORNEY DOCKET NO.	SERIAL NO.
1748-000001/US	10/766,226
APPLICANT	
Benjamin A. Buscher, et. al	
FILING DATE	GROUP
January 28, 2004	unknown

U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
1.		4,865,967	Sep 12, 1989	Shiraishi et al.	435/6	Nov. 30, 1987
2.		4,980,281	Dec. 25, 1990	Housey	435/29	Feb. 10, 1988
3.		5,118,601	Jun. 2, 1992	Gruber	435/5	Aug. 31, 1989
4.		5,266,464	Nov. 30, 1993	Housey	435/29	Aug. 10, 1989
5.		5,358,721	Oct. 25, 1994	Guittard et al.	424/473	Dec. 4, 1992
6.		5,366,862	Nov. 22, 1994	Venton et al.	435/7.1	Aug. 21, 1992
7.		5,384,243	Jan. 24, 1995	Gutkind et al.	435/6	Dec. 11, 1992
8.		5,510,240	Apr. 23, 1996	Lam et al.	435/7.1	Feb. 8, 1993
9.		5,547,841	Aug. 20, 1996	Marotta et al.	435/6	Dec. 15, 1992
10.		5,591,646	Jan. 7, 1997	Hudson et al.	436/518	Sep. 2, 1992
11.		5,601,975	Feb. 11, 1997	Bonyhadi et al.	435/5	Jun. 6, 1995
12.		5,645,982	Jul. 8, 1997	Bonyhadi et al.	435/5	Aug. 19, 1993
13.		5,688,655	Nov. 18, 1997	Housey	435/7.21	Mar. 17, 1995
14.		5,738,985	Apr. 14, 1998	Miles et al.	435/5	Apr. 1, 1994
15.		5,747,338	May 5, 1998	Giese et al.	435/348	Sep. 25, 1996
16.		5,814,460	Sep. 29, 1998	Venton et al.	435/7.1	Aug. 9, 1993
17.		5,830,644	Nov. 3, 1998	West et al.	435/6	Nov. 12, 1993
18.		5,843,693	Dec. 1, 1998	Halenbeck et al.	435/23	Feb. 27, 1995
19.		5,872,015	Feb. 16, 1999	Venton et al.	436/538	May 10, 1996
20.		5,877,007	Mar. 2, 1999	Housey	435/252.3	Jun. 7, 1995
21.		6,107,059	Aug. 22, 2000	Hart	435/69.7	Apr. 29, 1992

Examiner:

Date Considered:

EXAMINER: Please initial if citation considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

FORM HDP-1449 (Based on Form PTO-1449)

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Sheet 2 of 4

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FILING DATE	GROUP
January 28, 2004	Unknown

U.S. PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Name	Class/ Subclass	(If appropriate) Filing Date
22.		6,156,496	Dec. 5, 2000	Miles et al.	435/5	Sep. 8, 1997
23.		US 6,172,047 B1	Jan. 9, 2001	Roizman et al.	514/44	Jun. 7, 1995
24.		US 6,207,861 B1	Mar. 27, 2001	Nash et al.	564/133	Feb. 17, 1998
25.		US 6,290,959 B1	Sep. 18, 2001	Wu et al.	424/150.1	Oct. 24, 1997
26.		US 6,319,668 B1	Nov. 20, 2001	Nova et al.	435/6	Jun. 24, 1996
27.		US 6,376,192 B1	Apr. 23, 2002	Elledge et al.	435/6	Nov. 28, 2000
28.		US 6,472,151 B1	Oct. 29, 2002	Weaver et al.	435/6	Aug. 10, 1999
29.		US 6,548,657 B1	Apr. 15, 2003	Burgin et al.	536/24.5	Dec. 18, 1998
30.		US 6,579,674 B2	Jun. 17, 2003	Miles et al.	435/5	Mar. 28, 2002
31.		US 2003/0138432 A1	Jul. 24, 2003	Glazier	424/178.1	Dec. 15, 2000
32.		US 2003/0152912 A1	Aug. 14, 2003	Dyall et al.	435/5	Jan. 29, 2002
33.		US 2003/0170613 A1	Sep. 11, 2003	Straus	435/5	Sep. 6, 2002
34.		US 6,623,961 B2	Sep. 23, 2003	Miles et al.	435/370	Mar. 28, 2002
35.		US 6,627,452 B1	Sep. 30, 2003	Volchek	436/150	Apr. 20, 2000
36.		US 2003/0198949 A1	Oct. 23, 2003	Goldmakher et al.	435/5	Jun. 18, 2003

FOREIGN PATENT DOCUMENTS

Ref. Desig.	Examiner's Initials	Document Number	Date	Country	Class/ Subclass	Translation Yes	No

Examiner:

Date Considered:

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Sheet 3 of 4

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1748-000001/US	10/766,226
APPLICANT	
Benjamin A. Buscher, et al.	
FILING DATE	GROUP
January 28, 2004	Unknown

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
1.	i	Shane Crotty, et al. The broad-spectrum antiviral ribonucleoside ribavirin is an RNA virus mutagen, <i>Nature Medicine</i> , Vol. 6, No. 12, December 2000 < http://medicine.nature.com >
2.	\	Michael Powers, et al., Development of a Real-Time Reverse Transcription PCR Multiplex Assay to Screen for Eastern, Western and Venezuelan Equine Encephalitis (C-318) presented May 21, 2003 at American Society of Microbiology General Meeting 2003 < http://www.idahotech.com/contact_it/ASM/asm2003.htm >
3.	\	DL Beck, et al. Disruption of Virus Movement Confers Broad-Spectrum Resistance Against Systemic Infection by Plant Viruses with a Triple Gene Block, National Academy of Science USA, October 25, 1994 < http://www.ncbi.nlm.nih.gov/pmc/articles/PMC137233/ >
4.	\	W. Markland, et al. Broad-Spectrum Antiviral Activity of the IMP Dehydrogenase Inhibitor VX-497: a Comparison with Ribavirin and Demonstration of Antiviral Additivity with Alpha Interferon, American Society for Microbiology , Antimicrob Agents Chemother, April 2000, < http://www.ncbi.nlm.nih.gov/pmc/articles/PMC137233/ >
5.	\	New Broad Spectrum Anti-Viral-VX-497, Sept. 25, 1999, < http://archive.mail-list.com/hbv_research/msg00270.html >
6.	\	Ulrich Melcher, Molecular Genetics - Reporter genes, Oct. 7, 1997 < http://opbs.okstate.edu/~melcher/MB/MGW4/MG429.html >
7.	\	Apath, LLC Technology Available for Licensing, March 17, 2003 < http://www.apath.com/Directory/Licensing.asp >
8.	\	National Center for Biotechnology Information - Taxonomy browser - ssRNA positive-strand viruses, no DNA stage, September 23, 2002 < http://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi >
9.	\	National Center for Biotechnology Information - Taxonomy browser - dsDNA viruses, no RNA stage, from Retroviruses, by Ed. J. M. Coffin et al, cold spring Harbor Laboratory Press, Cold Spring Harbor, NY, 1997 < http://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi >
10.	\	National Center for Biotechnology Information - Genome – Retroviruses, September 23, 2002 < http://www.ncbi.nlm.nih.gov/retroviruses/genomes/genom.html >

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Date Considered:

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Sheet 4 of 4

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APPLICANT	
Benjamin A. Buscher, et al.	
FILING DATE	GROUP
January 28, 2004	Unknown

OTHER DOCUMENTS (including Author, Title, Date, Pertinent Pages, etc.)

Ref. Desig.	Examiner's Initials	
11.	\	Virus Taxonomy – 2002 in genomic order, June 28, 2002 < http://life.bio2.edu/lctv/fr-fst-q.htm >
12.	\	Apath, LLC Screening Platform, March 17, 2003, < http://www.apath.com/Directory/Screening_Platform/Screening_Platform.asp >
13.	\	Vertex Pharma, Vertex Reports Six-Month Results from Phase II Clinical Study of Merimepodib (VX-497) in HCV, October 17, 2003 < http://www.natap.org/2003/oct/101703_1.htm >
14.	\	Apath, LLC Drug Discovery, Apath Antiviral Drug Discovery, March 17, 2003 < http://www.apath.com/Directory/Antiviral_Drug_Discovery/Drug_Discovery.asp >
15.	\	Vertex Pharmaceuticals to Develop and Commercialize New Treatment for Hepatitis C Virus (HCV) Infection November 10, 2003 < ">http://www.prnewswire.com/cgi-bin/stories.pl?ACCT=104&STORY=/www/story/11-10-2003/002055037&EDATE=>

Examiner:

Date Considered:

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